

Veronica – SKYLER™ Series

Growing Guidelines

March 2017

Contents

- Botanical Background
- Growth Cycle
- Growth Conditions
- Plant Protection
- Commercial & Competitive Varieties

Botanical Background

Veronica longifolia belongs to the Globulariaceae family and in the past to the Scrophulariaceae family.

Origin: Northern hemisphere and its distribution mainly in Asia and Europe. In this type, about 500 species – annuals and perennials - in blue, white, pink, purple and reddish.

Favorable growth conditions: Most species prefer cool habitats

Growth Cycle

- **Propagation** – Veronica is often propagated vegetatively from mother plants grown in the nursery without additional lighting or darkness.
- It is preferable to produce the cuttings from the lower section of the mother plant in order to preserve their vegetative nature.
- Cuttings should be compact and have 4 pairs of leaves.
- **Recommended planting times:** Under 4 seasons – when temperatures are moderate in late autumn and winter months. Veronica prefers cool growth conditions in order to reach high quality flowering.
Under equator conditions - during the cool periods.
- Autumn planting will yield a flowering flush in the beginning of the winter and planting in the winter months will bloom in early spring. In both variations, it is possible to prune and reach another flush.

Towards Flowering



20.3.17

1 month later- 20.4.17



Preparing the Area & Planting

- It is preferable to grow Veronica under a structure – either in a tunnel or a greenhouse where it will be possible to close for heating in the winter months and shade during warm periods.

- The soil must be disinfected before planting, with an emphasis on the crop's susceptibility to nematodes. The disinfection should be done with Metam Sodium, such as: Adigan + Condor.

Condor should be applied a week before disinfection with the Adigan and the latter, at least two weeks before planting. If possible, it is advisable to sterilize the area earlier in order to incorporate solar disinfection, further to the Adigan treatment.

- The flowerbed width should be 1 m and the width of the path - 50 cm.

- Planting density - 24 plants per square meter - 4 rows of 6 plants per row at a distance of 16 cm between each plant. Total plants per 1,000 square meters = 1 dunam - 15,600 and in one hectare - 156,000 plants.

Preparing the Area – Continued

- The irrigation system should include 2 dripping extensions (1.2-2 liters per hour) at a spacing of 15-20 cm. between one drip opening to the other.
- Above the flowerbed, it is recommended to use the sprinklers to help during the establishment phase and during the warmer days.
- Supporting nets & ladders – ladders should be positioned at the ends of the flowerbeds and at a distance of 2.5 m. It is recommended to deploy two nets - 20x20 cm. at 30 cm. high and the other net – 30x30 cm. 50-60 cm. high.
It is possible to also use one 20x20 cm. net, which can be pulled up as the crop develops and branches elongate.
- **There is no need for a lighting system to induce flowering.**

After Planting



24 plants in a square meter along 2 drip extensions with 2 supporting nets



Irrigation & Fertilization

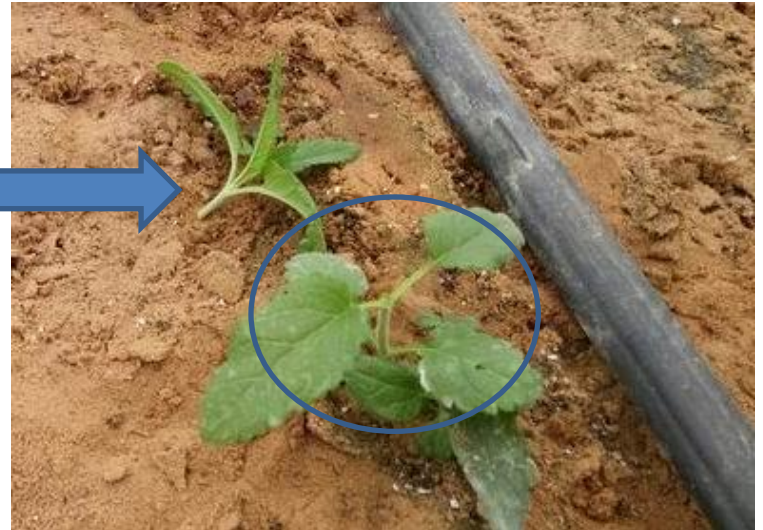
- Upon planting, irrigation frequency should be observed with the help of the above sprinklers and according to the environment temperature, between 5-8 cubic meters of water per day. At the end of the day, the irrigation should increase by means of the dripping, irrigation with fertilizers of 2 cubic meters per 1,000 square meters.
- When temperatures drop, the amount of water and the frequency of irrigation should be reduced. In the cold season, when growth and flowering are delayed, fertilization and irrigation should be reduced to prevent massive vegetative growth.
- At the end of the harvest, irrigations should be with more intervals and without fertilizers until growth has renewed.

Pinching

About two to three weeks from the time of planting, it is necessary to pinch the Veronica plants after they have established in the soil. Pinch should be done above 3-4 pairs of leaves, and not higher than this.



Plant apex
after the pinch



After Pinch



After the pinch and removal of the dominant apex, 4-5 new young stems sprout

Harvest

- The harvesting stage will take place when about one-third of the inflorescence has opened.



Harvest

- The harvested branch in the field should be kept in a solution containing anti-bacterial material such as:

TOG 3 - 0.15% +

STS 0.2% +

Sugar 3%

Flowers will be transferred to the storeroom for sorting and bunching, and should be kept in solution for approx. 4 hours and only then to cool storage for one night at least and up to 72 hours.

- Packing should be done vertically (standing) for shipping. Veronica is a geotropism plant, and its bending cannot be rectified later.

Pruning

- Pruning is actually done while harvesting.
- The new shoots will emerge from the remaining stumps.
- A new flush is received from the new set of shoots.
- Avoid pruning when temperatures are high (above 30-35°C).

New shoots sprout from
stumps of the previous flush



After Pruning



The Expected Yield

The expected yield per dunam - 1,000 square meters – above 100,000 harvesting branches and approx. 1,000,000 flowers per hectare



Flowering Limitations

Limitations in obtaining high quality flowers:

1. Very cold temperatures at night $2-4^{\circ}\text{C}$ and up to $7-8^{\circ}\text{C}$ during the day.
2. Very hot temperatures - over $30-35^{\circ}\text{C}$ in the day (therefore, as temperatures increase, maximum ventilation of the structure and a 40% shading net should be taken into account).



At high temperatures the induction is rapid and the flowering branches are about 40 cm. long

Cold temp.
"shrink" the
inflorescence



Planning Planting & Flowering

- Therefore, flowering should be avoided during the too warm periods. It is better to plant as the weather gets cooler.
- Likewise, flowering should be avoided for mid-winter and it is recommended to plan the planting / pruning so that they bypass the very cold temperatures. Veronica thrives when grown under cool temperatures and will produce a beautiful and high quality flowering flush at the end of this period.



Spring performances

Plant Protection

Pests:

White fly - especially in the summer (regular treatment with one of these materials:

Imidacloprid, Diafenthiuron, Buprofezin, Pyriproxyfen)

Red spider mites & *Polyphagotarsonemus latus*

Spodoptera littoralis

Leaf miner

Nematodes

Diseases:

Rhizoctonia

Powdery mildew

Sclerotinia sclerotiorum



Danziger SKYLER™ Series



Skyler™ Pink



Skyler™ Blue



Skyler™ White

Our Varieties



Good Luck!



THANK YOU :)